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# Broward Leaders Water Academy

Kick-Off Meeting  
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# A Water & Wastewater Utility's Perspective on Water Supply & **Price**



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**Who are the agencies in  
Broward County concerned with  
Water Resource Management?**

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**&**

**What facets are they  
most interested in?**



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## For the most part, they are:

- United States Environmental Protection Agency - Quality
- United States Army Corps of Engineers - Quantity
- Florida Department of Environmental Protection - Quality
- Broward County Health Department - Quality
- South Florida Water Management District - Quantity
- Florida Department of Community Affairs - Quantity
- Broward County Environmental Protection and Growth Management Department - Quality & Quantity
- (21) Special Drainage Districts - Quantity
- (28) Water & Wastewater Utilities - Quality, Quantity, **Price**



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# What goes into a Utility's **price** for water?





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**Capital costs for water and wastewater treatment plants, water and sewer mains, production wells, disposal wells etc.**

**Rehab of aging infrastructure – water and sewer mains, treatment plants**

**Operational Costs (electricity, chemicals, labor, maintenance)**

**New technology (meeting water quality regulations)**

**Cost of Money**

**Alternative Water Supply Projects**

# What is the **PRICE** of the average water & sewer utility bill **NOW**?



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- Average in Broward County is:

+-\$59.80

- Plantation: \$45.33

# A conservation rate structure for water only



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Consumption, gallons	Rate/1,000 gals	
	Proposed Conservation Rate	Present Plantation Rate
0-6K	\$1.29	\$1.40
7K-12K	\$2.58	\$1.69
13K-20K	\$3.87	\$2.06
21K-30K	\$5.16	
31K-50K	\$6.54	
Above 50K	\$7.74	\$2.54

# Water Conservation & Power Conservation, A Couple of Givens:



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- The average Florida household uses +- 900 kwh/month of electricity.
- To treat and pump 1000 gallons of water to our customers and take back the water for treatment as wastewater and dispose of it, utilizes, conservatively, 11 kwh
- 11 kwh will power a 100 watt bulb, for four hours a day for a month.

Now,



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- If Plantation's 28,000 water customers were to cutback 10% and save an average of 1000 gallons a month... that would be a savings of 28 million gallons a month. **That's 28 million gallons a month!**
- The power savings from this water conservation effort would be enough to power 342 homes for one month with electricity! **That's 342 homes!**

**Water conservation and energy  
conservation go hand and glove**

# Strategies for Plantation to achieve water goals



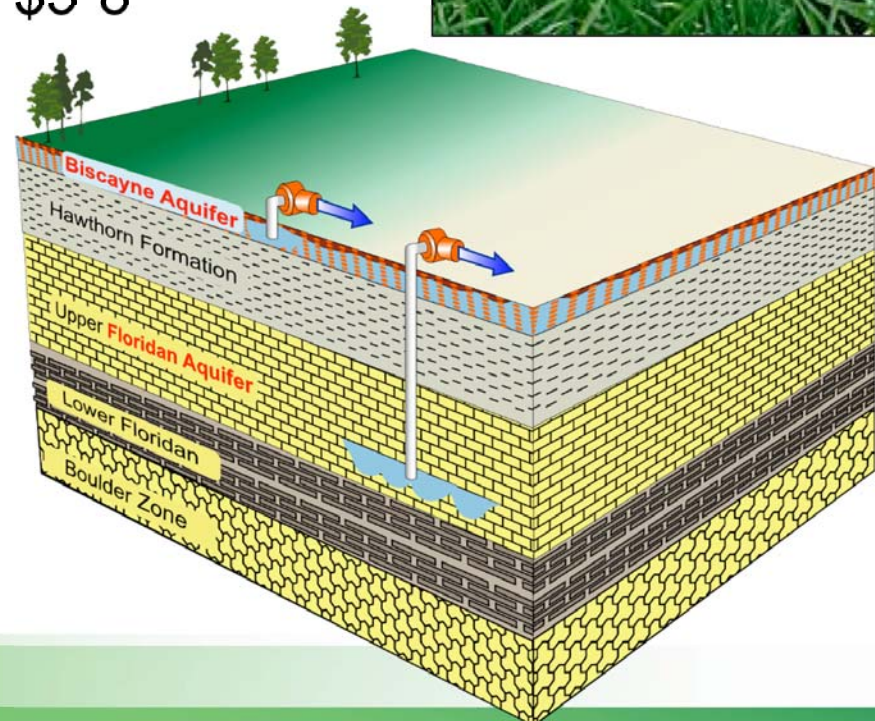
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 Demand management  
through conservation

 Utilize Alternative Water Supply  
(**Pricey, energy intensive**)

# Alternative Water Supply Alternatives & Capital Cost: \$/gal.

- Irrigation & Reclaimed Water – \$10-14
- Floridan Aquifer/RO – \$5-9
- Canal Recharge – \$11-17
- C-51 (L-8) Reservoir – \$3-8



# Getting a handle on how much water a utility uses



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- Per/capita consumption for Plantation
  - Lower East Coast Water Supply Plan Projection: 158 gal/capita/day
  - Reduced by 30%
  - Present Use: 110 gal/capita/day



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# How to lower per capita consumption

- Mindfulness of water use/education
  - **Price** of water
  - Landscape design
- Year-round irrigation measures / 2 days a week, Rain sensors
- Plumbing retrofits (toilets, shower heads)
- Tenacity

# Summary – A Utility needs to keep an eye on:



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- Regional view & solutions
- Per capita consumption
- Conservation for Sustainability **(Go Green)**
- Price
- Tenacity